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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,859

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EXAMINER

LOEWE, ROBERT S

ART UNIT

PAPER NUMBER

1796

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DELIVERY MODE

06/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,859	Applicant(s) FUJIMOTO ET AL.	
	Examiner ROBERT LOEWE	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 4/27/09 have been fully considered. Applicants have directed the Examiners attention again to working examples 1 and 2 and comparative examples 1 and 2 of the instant specification in an attempt to show unexpected results. Specifically, Applicants argue that Hirose does not teach or suggest controlling both the hydrolyzable silyl group content and the molecular weight of the polyether. The Examiner would first like to mention that any conclusions made regarding any comparisons between working example 2 and comparative examples 1 and 2 cannot be relied upon because working example 2 employs a different amount of tackifier than what is used in the comparative examples (50 parts versus 80 parts). It is well-known that adjusting the amount of tackifier would have an effect on the overall adhesive strength.

Applicants rely on the working and comparative examples in the instant specification to show that polymers which have a hydrolyzable group content outside the claimed range (0.75 and 0.8) give significantly poorer adhesive strength. Applicants also rely on the working examples to show that polymers having molecular weights below Applicants claimed range ($M_w = 10,200$) also show significantly poor adhesive strength. However, Applicants have not shown any examples which have a hydrolyzable group content which falls within the claimed range coupled with a polyether having a molecular weight which falls below the claimed range. In other words, Applicants have not compared the closest prior art of Hirose et al. (US Pat. 4,463,115) to the instant invention. Specifically, there are no examples provided in the instant disclosure which have a molecular weight which is below the claimed range and which has the

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claimed hydrolyzable silyl group content. In order to disqualify Hirose et al. as a prior art reference, Applicants would need to perform the following two experiments to show that the compositions of the instant invention afford unexpectedly better adhesive properties when compared to those compositions as taught by Hirose et al. :

(1) Prepare a composition employing the silyl-terminated polyoxypropylene polymer of reference example 3 of Hirose et al. (molecular weight of 8,200 or thereabouts and having a silyl-group content of 0.55 or thereabouts) along with a tackifier and curing catalyst.

(2) Prepare a composition employing a silyl-terminated polyoxypropylene according to the instant invention along with a tackifier and curing catalyst.

The tackifier employed should be identical in each experiment and further they must be present in identical amounts with said amounts falling within the range of instant claim 1. The curing catalyst employed should also be identical in each experiment and further they must be present in identical amounts. Finally, both samples should be cured under identical conditions and applied to the same substrates under the same conditions. Finally, any physical property measurements, such as adhesive strength, would need to be obtained in an identical fashion.

Claim Objections

Claim 7 is objected to because it is dependent on a canceled claim. Further, it does not appear that claim 7 could properly depend from any other claim without causing a duplicate claim warning. Specifically, if claim 7 were amended to be dependent from claim 1, then it would be a duplicate of instant claim 4. If claim 7 were amended to be dependent from claim 2,

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then it would be a duplicate of instant claim 6. Therefore, claim 7 will **not** be treated on its merits.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US Pat. 4,463,115).

Claim 1: Hirose et al. teaches a composition comprising (A) an oxyalkylene polymer having a molecular weight up to 30,000 (3:5-6) and contains a hydrolyzable silyl group in each molecule (1:63-45), (B) a tackifier resin (3:21-29), and (C) a curing catalyst (3:47-62). Specifically, in regards to the ratio of equivalents of hydrolyzable silyl groups to the total amount of functional groups of the polymer precursor, reference example 3 of Hirose et al. shows a reaction of a polyoxypropylene diol with a silane-capping agent in such a manner as to yield a silyl-capped polypropylene ether having 55% of the end groups having silyl groups. Such an

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amount satisfies the limitation that between 0.3 and 0.7 equivalents of hydrolyzable silyl groups are present relative to the total amount of functional groups in the oxyalkylene polymer. While the overlap in the molecular weight range taught by Hirose et al. and the molecular weight range which is claimed is not sufficient to warrant a case of anticipation, Hirose et al. nevertheless renders obvious the limitations of instant claim 1. A prior art reference may be relied upon for all that it teaches, including non-preferred embodiments. So while Hirose et al. does not explicitly teach any polymers having molecular weights which satisfy the limitations of instant claim 1, the teachings in the specification render obvious to a person having ordinary skill in the art polymers having a molecular weight of up to 30,000, which falls in the range of 20,000 to 50,000 of instant claim 1. The motivation to employ polymers having a molecular weight range which satisfies part of the range of instant claim 1 is rooted in the teaching of Hirose et al. Hirose et al. further teaches that the tackifier is present in amounts of from 10 to 140 parts by weight per 100 parts by weight of the polyether, which substantially overlaps the range of instant claim 1 (3:21-29).

Claim 4: Hirose et al. further teaches that the hydrolyzable group in the hydrolyzable silyl-group containing polymer (A) is represented by the formula (I) of instant claims 4 and 7 (2:20).

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US Pat. 4,463,115) as applied to claim 1 above, and further in view of Ueda et al. (WO03/35755). For convenience, the English-language equivalent, US Pat. 7,144,953 will be relied upon.

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Hirose et al. renders obvious the composition of instant claim 1, as described above. Hirose et al. further teaches that the tackifier is present from 10 to 140 parts by weight based on 100 parts by weight of polyether component (A) of instant claim 5 (3:21-29). Hirose et al. further teaches that the hydrolyzable group in the hydrolyzable silyl-group containing polymer (A) is represented by the formula (I) of instant claim 6 (2:20). Hirose et al. does not explicitly teach that the polydispersity of the polyether component (A) be no more than 1.6. However, Ueda et al. does teach employing silyl-terminated polyethers having polydispersities of less than 1.6 (3:60-65). Hirose et al. and Ueda et al. are combinable because they are from the same field of endeavor, namely, curable compositions comprising silyl-terminated polyethers. At the time of the invention, a person having ordinary skill in the art would have found it obvious to employ silyl-terminated polyethers having polydispersities less than 1.6, as taught by Ueda et al., into the compositions of Hirose et al. The skilled artisan would have been motivated to do so because Ueda et al. teaches that employment of polyethers having narrow polydispersities (i.e., less than 1.6) yields lower viscosity solutions which are easier to work with than those polyethers having higher polydispersities (3:65-4:3). Hirose et al. teaches pressure sensitive adhesives having little to no solvent (1:34-38). Hence, it would be beneficial, in the absence of solvents, to employ lower viscosity polyethers for better workability.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571)270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./

Examiner, Art Unit 1796

29-Apr-09

/Randy Gulakowski/

Supervisory Patent Examiner, Art Unit 1796